## Supplemental Material for:

# Increasing vegetable intake by emphasizing tasty and enjoyable attributes: A randomized controlled multi-site intervention for taste-focused labeling

\*correspondence to: turnwald@stanford.edu

### **Table of Contents**

List of Investigators	2
Supplemental Methods	3
Supplemental Results	4
Table S1	6
Table S2	8
Table S3	10
Table S4	11
Тable S5	12
Table S6	13
Figure S1	14
Figure S2	15

#### **List of Investigators**

Bradley P. Turnwald, <sup>1</sup> Jaclyn D. Bertoldo, <sup>2</sup> Margaret A. Perry, <sup>1</sup> Peggy Policastro, <sup>3</sup> Maureen Timmons, <sup>4</sup> Christopher Bosso, <sup>5</sup> Priscilla Connors, <sup>6</sup> Robert T. Valgenti, <sup>7</sup> Lindsey Pine, <sup>8</sup> Ghislaine Challamel, for The Menus of Change University Research Collaborative (MCURC), <sup>9</sup> Christopher D. Gardner, <sup>10</sup> & Alia J. Crum<sup>1</sup>

The Menus of Change University Research Collaborative (MCURC): Shirley J. Everett, Co-Founder; Greg Drescher, Co-Founder; Eric Montell, Co-Founder; Sophie Egan, Co-Founder; Christopher D. Gardner, Co-Founder; Jean-Xavier Guinard, MCURC Research Working Group Chair; Ghislaine Challamel, Research Program Manager

Stanford University: Shirley J. Everett, Senior University Administrator; Eric Montell, Dining Director; Christopher D. Gardner, Professor; Daniel Donguines and Erica Holland-Toll, Executive Chefs; Bradley P. Turnwald, Postdoctoral Scholar; Jaclyn D. Bertoldo, Assistant Director of Food Choice Architecture; Ghislaine Challamel, Research Program Manager; Alia J. Crum, Assistant Professor, Margaret A. Perry, Research Coordinator, Stacey Huang, Amanda Jacquez, Taylor Kirkpatrick, Serena Lin, Sayuri Sekimitsu, Research Assistants

Rutgers University: Peggy Policastro, Professor; Bryan Cardinale, Chef Manager; Madeline Holt, Research Assistant

Northeastern University: Maureen Timmons, Director of Dining Services; Christopher Bosso, Professor

*University of North Texas:* Peter Balabuch, **Director of Residential Dining Services**; Priscilla Connors, **Associate Professor**; Andrew Klipsch, **Chef General Manager**; Brennon Turner, **Operations Manager**; Kyle Vandergriff, **Operations Chef**; Austin Cecil, **Line Cook** 

*Lebanon Valley College:* Robert T. Valgenti, **Professor;** Conner Irvin and Collyn Gingrich, **Research Assistants** 

University of Southern California: Erik Russell, Associate Director of Residential Dining; Carlos Perez, Senior Manager; Nathan Martinez, Kitchen Manager; Omar Salazar, Assistant Kitchen Manager; Renato Colmenares, Assistant Kitchen Manager; Norma Castillo, Assistant Manager; Javier Zarate, Assistant Manager; Lindsey Pine, Hospitality Dietitian

<sup>&</sup>lt;sup>1</sup>Department of Psychology, Stanford University

<sup>&</sup>lt;sup>2</sup>Stanford University Residential and Dining Enterprises, Stanford University

<sup>&</sup>lt;sup>3</sup>Institute for Food, Nutrition, and Health, Rutgers University

<sup>&</sup>lt;sup>4</sup>Dining Services, Northeastern University

<sup>&</sup>lt;sup>5</sup>School of Public Policy and Urban Affairs, Northeastern University

<sup>&</sup>lt;sup>6</sup>Department of Hospitality and Tourism Management, University of North Texas

<sup>&</sup>lt;sup>7</sup>Department of Philosophy, Lebanon Valley College

<sup>&</sup>lt;sup>8</sup>USC Hospitality, University of Southern California

<sup>&</sup>lt;sup>9</sup>A complete list of the MCURC collaborators is provided below

<sup>&</sup>lt;sup>10</sup>Stanford Prevention Research Center, Stanford University

#### **Supplemental Methods**

To measure the tastiness of vegetable recipes used in the multi-site study, N = 301 online survey participants were recruited from Amazon Mechanical Turk to view the recipe for each vegetable dish (displayed to participants as presented in Table S2). Recipes briefly described the ingredients and preparation method and did not contain taste-focused or health-focused language. Each participant viewed a random half of the recipes in a random order and rated each recipe on a scale of 1 (not at all delicious) to 7 (very delicious). Table S2 displays the mean tastiness rating for each recipe, grouped by school.

To confirm that these expected tastiness ratings were representative of actual tastiness, a sample of N = 139 student diners from School A were recruited to taste a sample of twelve of the recipes. For each of four common vegetables (Brussels sprouts, carrots, green beans, and corn) that were prepared using a variety of different recipes across schools in the study, we selected the lowest-rated, a moderately-rated, and the highest-rated recipe from the online survey of participants' mean tastiness ratings. Participants tasted the three preparations of each of the four vegetables in a random order and indicated how tasty they thought each recipe was on a 7-point scale (1 = not at all delicious, 7 = very delicious) immediately after tasting it, before moving on to try the three preparations of the next vegetable in a random order. Each participant tasted and rated all twelve recipes.

Results revealed that actual tastiness ratings from the student diners were highly correlated with the expected tastiness ratings from the online survey participants (r = .80, p = .002). Therefore, the mean tastiness ratings for all vegetable recipes from the online survey participants were converted to z scores to test whether the effect of labeling condition on vegetable selection was moderated by (a) how tasty an individual vegetable dish was prepared, or (b) how tasty, on average, the vegetable dishes at a given school were prepared (calculated as the mean tastiness rating among all vegetable dishes served at each school).

#### **Supplemental Results**

#### Exploratory results of comparisons among the 6 label types in Supplementary Study B

Below we describe exploratory results for comparisons among the 6 label types in Supplementary Study B. This full set of comparisons is exploratory and is reported solely for readers interested in the non-hypothesized comparisons; therefore, the p-values are uncorrected for multiple comparisons. All results are from the mixed effects regression model that predicted the outcome as a function of the effect of label condition plus random-intercept effects of participant and of vegetable dish. The results are reported separately for each of the three outcomes in Supplementary Study B below. Table S6 presents the means and standard deviations of each of the 6 label conditions for each of the three outcomes.

Expectations of a positive taste experience. Health-focused labeling led to significantly lower expectations of a positive taste experience compared to each of basic (b = 0.13, 95% CI = [0.00, 0.26], p = .045), fancy (b = 0.29, 95% CI = [0.16, 0.42], p < .001), vague positive (b = 0.40, 95% CI = [0.27, 0.53], p < .001), ingredients list (b = 0.50, 95%) CI = [0.37, 0.63], p < .001), and tasty (b = 0.86, 95% CI = [0.73, 0.99], p < .001) labels. Basic labeling led to significantly lower expectations of a positive taste experience compared to each of fancy (b = 0.16, 95% CI = [0.03, 0.28], p = .018), vague positive (b = 0.27, 95% CI = [0.14, 0.40], p < .001), ingredients list (b = 0.28) 0.36, 95% CI = [0.24, 0.49], p < .001), and tasty (b = 0.72, 95% CI = [0.60, 0.85], p < .001) labels. Fancy labeling led to significantly lower expectations of a positive taste experience compared to ingredients list (b = 0.21, 95% CI = [0.08, 0.34], p = .002) and tasty (b = 0.57, 95% CI = [0.44, 0.70], p < .001) labels, but not compared to vague positive labels (b = 0.11, 95% CI =[-0.02, 0.24], p = .092). Vague positive labeling led to significantly lower expectations of a positive taste experience compared to tasty labels (b = 0.46, 95% CI = [0.33, 0.59], p < .001), but not compared to ingredients list labels (b = 0.10, 95% CI = [-0.03, 0.23], p = .137). Ingredients list labels led to significantly lower expectations of a positive taste experience compared to tasty labels (b = 0.36, 95% CI = [0.23, 0.49], p < .001).

**Likelihood of choosing.** Health-focused labeling led to significantly lower likelihood of choosing vegetables compared to each of fancy (b = 0.21, 95% CI = [0.07, 0.35], p = .004), vague positive (b = 0.26, 95% CI = [0.12, 0.40], p < .001), ingredients list (b = 0.39, 95% CI = [0.25, 0.53], p < .001), and tasty (b = 0.81, 95% CI = [0.67, 0.95], p < .001) labels, but not compared to basic labels (b = 0.01, 95% CI = [-0.13, 0.15], p = .88). Basic labeling led to significantly lower likelihood of choosing vegetables compared to each of fancy (b = 0.20, 95%CI = [0.06, 0.34], p = .006), vague positive (b = 0.25, 95%) CI = [0.11, 0.39], p < .001),ingredients list (b = 0.38, 95% CI = [0.24, 0.52], p < .001), and tasty (b = 0.80, 95% CI = [0.66, 0.94], p < .001) labels. Fancy labeling led to significantly lower likelihood of choosing vegetables compared to ingredients list (b = 0.18, 95% CI = [0.04, 0.32], p = .011) and tasty (b = 0.18, 95% CI = [0.04, 0.32], p = .011) 0.60, 95% CI = [0.46, 0.74], p < .001) labels, but not compared to vague positive labels (b =0.06, 95% CI = [-0.08, 0.20], p = .44). Vague positive labeling led to significantly lower likelihood of choosing vegetables compared to tasty labels (b = 0.55, 95% CI = [0.41, 0.69], p <.001), but not compared to ingredients list labels (b = 0.13, 95% CI = [-0.01, 0.27], p = .078). Ingredients list labels led to significantly lower likelihood of choosing vegetables compared to tasty labels (b = 0.42, 95% CI = [0.28, 0.56], p < .001).

Surprise/curiosity. Basic labeling led to significantly lower surprise/curiosity compared to each of the other conditions (b's > 0.50, p's < .001). Health-focused labeling led to significantly lower surprise/curiosity compared to each of vague positive (b = 0.39, 95% CI = [0.26, 0.52], p < .001), fancy (b = 0.98, 95% CI = [0.84, 1.11], p < .001), and tasty (b = 0.97, 95% CI = [0.84, 1.11], p < .001) labels, but not compared to ingredients list labels (b = 0.12, 95% CI = [-0.01, 0.25], p = .072). Ingredients list labeling led to significantly lower surprise/curiosity compared to vague positive (b = 0.27, 95% CI = [0.13, 0.40], p < .001), fancy (b = 0.86, 95% CI = [0.72, 0.99], p < .001), and tasty labels (b = 0.85, 95% CI = [0.72, 0.98], p < .001). Vague positive labeling led to significantly lower surprise/curiosity compared to fancy (b = 0.59, 95% CI = [0.46, 0.72], p < .001) and tasty (b = 0.59, 95% CI = [0.45, 0.72], p < .001) labels. Fancy labels did not lead to significantly more surprise/curiosity than tasty labels (b = 0.00, 95% CI = [-0.13, 0.13], p = .98).

Table S1. All vegetable labels used in the multi-site study

Site	Basic	Taste-focused	Health-focused
A	Broccoli	Sesame Garlic Roasted Broccoli with Creamy Tahini Sauce	Smart Choice Broccoli
A	Brussels Sprouts	Tender Roasted Brussels Sprouts & Crispy Shallots	Cholesterol Free Brussels Sprouts
A	Carrots	Maple Glazed Carrots with Herbs & Lemon	Reduced Sodium Carrots
A	Green Beans	Sizzlin' Szechuan Green Beans with Toasted Garlic	Nutritious Green Beans
A	Squash	Aromatic Thai Curry Kabocha Squash with Zesty Ginger	Light n' Low Carb Squash
A	Sweet Potatoes	Slow Roasted Curry Sweet Potatoes with Fragrant Ginger & Garlic	High Fiber Sweet Potatoes
A	Turnips	Herb n' Honey Balsamic Glazed Turnips	Healthy Choice Turnips
Α	Zucchini	Tuscan Style Fire Roasted Zucchini & Tomatoes	Lighter Choice Zucchini
В	Broccoli	Asian Inspired Sesame Glazed Broccoli	Light n' Low Carb Broccoli
В	Broccoli & Cauliflower	Tender Oven Roasted Broccoli & Cauliflower	Vitamin-Rich Broccoli and Cauliflower
В	Brussels Sprouts	Hickory Smoked Bacon & Chargrilled Brussels Sprouts	Healthy High Fiber Brussels Sprouts
В	Carrots & Broccoli	Zesty Chili Garlic Carrots & Broccoli	Healthy Choice Carrots & Broccoli
В	Cauliflower	Zesty Buffalo Garlic Cauliflower Bites	Antioxidant-Rich Cauliflower with Greek Yogurt
В	Corn	Salt n' Pepper Oven-Roasted Corn on the Cob	Healthy High Fiber Corn
В	Eggplant	Shanghai Spiced Glazed Eggplant	Heart Healthy Eggplant
В	Lima Beans	Cajun Style Smoky Lima Beans	Light n' Healthy Lima Beans
В	Mushroom Barley Stew	Slow-Simmered Sage & Rustic Mushroom Stew	Heart Healthy Barley Mushroom Stew
В	Okra with Tomatoes	New Orleans Style Okra & Creole Tomatoes	Low Carb Okra & Tomatoes
В	Spinach	Classic Citrus Splashed Spinach	Healthy Choice Spinach
В	Squash	Savory Balsamic & Herb Glazed Butternut Squash	Healthy Choice Squash
В	Squash with Spinach	Smoky Butternut Squash & Delicious Curried Spinach	Nutritious Squash with Spinach
В	Vegetables	Caramelized Balsamic & Herb Vegetable Medley	Light n' Fit Vegetables
В	Zucchini & Tomato	Panko Crusted Parmesan Zucchini & Tomato Medley	Healthy Choice Zucchini & Tomatoes
С	Arugula	Chef's Favorite Homestyle Baby Arugula	Light n' Fit Arugula
С	Beets with Oranges	Twisted Citrus Glazed Beets	Heart Healthy Beets with Oranges
С	Cabbage	Lemon & Melted Butter Braised Cabbage	Lighter Choice Cabbage
С	Cabbage	Tender Butter-Braised Cabbage with Bright Lemon Zest	Nutritious Green Cabbage
С	Carrots	Caramelized Slow Roasted Carrots	Healthy Vitamin-Rich Carrots
С	Carrots	Mouthwatering Slow-Roasted Carrots with Olive Oil drizzle	Healthy Choice Carrots
С	Cauliflower Mash	Creamy Homestyle Cauliflower Mash	Low Carb Mashed Cauliflower
С	Creamed Corn	Ultimate Creamy Parmesan Sweet Corn	Lighter Style Creamed Corn
С	Creamed Spinach	Southern Style Creamed Spinach & Caramelized Onions	Vitamin-Rich Creamed Spinach
С	Green Bean	Hickory Smoked Bacon & Green Bean Casserole	Low Carb Green Bean

	Casserole		Casserole
С	Leeks	Tender Braised Leeks with Lemon Zest	Light n' Healthy Leeks
		Boldly Roasted White Button Mushrooms with	
С	Mushrooms	Olive Oil Drizzle	Light n' Healthy Mushrooms
C	Peas	Tavern Style Sizzlin Sweet Peas	Nutritious Green Peas
C	Squash	Artisan Glazed Butternut Squash with Sage & Brown Sugar	High Fiber Butternut Squash
D	Broccoli	Flavorful Garlic & Herb Slow-Roasted Broccoli	Antioxidant-Rich Broccoli
D	Brussels Sprouts	Tender Caramelized Brussels Sprouts with Olive Oil Drizzle	Healthy Choice Brussels Sprouts
D	Cabbage	Sizzlin' Cajun Style Cabbage	Light n' Low Carb Cabbage
D	Cabbage	Southern Style Country Fried Cabbage	Light n' Fit Cabbage
D	Carrots	Twisted Citrus Glazed Carrots	Nutritious Vitamin-Rich Carrots
D	Collard Greens	Mama's Classic Salt n' Pepper Collard Greens	Heart Healthy Collard Greens
D	Corn	Autumn Harvest Sweet Corn on the Cob	Nutritious Steamed Corn
D	Creamed Corn	Southern Classic Creamed Sweet Corn	Lighter Style Creamed Corn
D	Green Beans	Classic Hickory Smoked Bacon Green Beans	Healthy High Fiber Green Beans
D	Green Beans	Chef's Favorite Toasted Almond Green Beans	Healthy Choice Green Beans with Almonds
D	Green Beans	Old Fashioned Country Style Green Beans with Bacon	Low Carb Green Beans
D	Kale	Deluxe Sauteed Kale with Rustic Garlic & Onions	Healthy Choice Kale
D	Spinach	Abuelitas Famous Guatemalan Spinach	Light n' Fit Spinach
D	Squash	Homestyle Brown Sugar Glazed Acorn Squash	Heart Healthy Squash
D	Squash	Ultimate Glazed Butternut Squash Wedges	High Fiber Squash
Е	Asparagus	Ultimate Chargrilled Asparagus	Nutritious Green Asparagus
Е	Broccoli	Juicy Tender Broccoli Florets	Low Carb Broccoli
Е	Broccoli	Crisp Tender Broccoli Florets	Low Sodium Broccoli
Е	Broccoli	Tender Juicy Broccoli Florets	Nutritious High Fiber Broccoli
Е	Brussels Sprouts	Autumn Harvest Tender Brussels Sprouts	Light n' Fit Steamed Brussels Sprouts
Е	Carrots	Juicy Slow-Cooked Rotisserie Baby Carrots	Healthy Choice Carrots
Е	Corn	Classic Country Harvest Sweet Corn	Reduced Sodium Corn
Е	Corn	Farm house classic Corn	Light n' Fit Steamed Corn
Е	Edamame	Asian Sesame Glazed Edamame	High Fiber Edamame
Е	Green Beans	Sizzlin' Garlic Parmesan Skillet Green Beans	Lighter Choice Green Beans
Е	Green Beans	Crisp Autumn Harvest Green Beans	Low Sodium Green Beans
Е	Green Beans	Crisp Country Harvest Green Beans	Light n' Fit Green Beans
Е	Green Beans	Crisp Countryside Green Beans	Heart Healthy Green Beans
Е	Mashed Cauliflower	Mama's Creamy Homestyle Cauliflower Mash	Low Carb Mashed Cauliflower
Е	Roasted Squash	Caramelized Slow-Roasted Squash Medley	High-Antioxidant Squash
Е	Roasted Vegetables	Mouthwatering Rotisserie Vegetables with Olive Oil Drizzle	Light n' Fit Mixed vegetables
Е	Roasted Vegetables	Mouthwatering Slow-Roasted Rotisserie Vegetables	Healthy Choice Assorted Vegetables
Е	Vegetable Ratatouille	Fragrant Herbes de Provence Vegetable Ratatouille	Heart Healthy Vegetables
Е	Vegetables	Bourbon Street Smoked Vegetable Jambalaya	Healthy Choice Mixed Vegetables

Note: Vegetable types that appeared multiple times within the same school were either different recipes or the same recipe served on a different day of the week. The experimental design controlled for any effects due to recipe, day of the week, or the food choices that surrounded a given vegetable dish by treating all of these cases as separate vegetable dishes that each received all three label types. Therefore, a given vegetable dish was only compared to the exact same recipe served on the same day of the week surrounded by the same protein and starch options.

Table S2. All vegetable recipes used in the multi-site study

Site	Recipe	Taste Rating
A	Turnips roasted with honey balsamic glaze (olive oil, balsamic vinegar, honey, salt), finished with thyme	3.49 (1.86)
A	kabocha squash roasted with olive oil, salt and pepper, drizzled with curry sauce (ginger, garlic, thai curry paste, and coconut milk)	4.32 (1.93)
A	zucchini roasted with red wine vinegar sauce (garlic, tomatoes, onions, olive oil, salt) finished with basil	4.55 (1.90)
A	brussels sprouts roasted with olive oil and salt, finished with crispy shallots and sundried tomatoes	4.57 (1.96)
A	sweet potatoes roasted with olive oil and salt, drizzled with curry sauce (ginger, garlic, thai curry paste, and coconut milk)	4.62 (1.83)
A	green beans sauteed in olive oil and tossed with chili garlic sauce (garlic, tamari, white vinegar, and chili paste)	4.81 (1.57)
A	broccoli roasted with olive oil, drizzled with tahini sauce (garlic, sesame oil, tahini, red wine vinegar, salt) finished with sesame seeds	4.93 (1.64)
A	carrots roasted with maple glaze (maple syrup, lemon juice, zest, olive oil, salt) finished with parsley	5.13 (1.82)
В	lima beans boiled and simmered with sauteed onions, paprika, tomatoes, cornstarch, salt and pepper	3.47 (1.82)
В	barley boiled and sauteed with onions, mushrooms, and garlic, vegetable broth, sage, sundried tomatoes, beans, salt and pepper. Simmered and finished with spinach and lemon juice.	3.76 (1.89)
В	eggplant sauteed with spicy soy sauce (soy sauce, vinegar, green chili peppers, sugar and cornstarch)	3.83 (1.87)
В	okra sauteed with onions, garlic, coriander, tomatoes, sugar, lemon zest, salt and pepper	3.91 (2.03)
В	spinach blanched and finished with lemon zest, salt and pepper	3.96 (1.75)
В	butternut squash roasted with sauteed onions, spinach, curry powder, paprika, salt and pepper	4.29 (1.93)
В	cauliflower breaded (garbanzo bean flour, garlic powder, salt, paprika), roasted with olive oil, and tossed in hot sauce	4.29 (2.04)
В	zucchini, carrots, bell peppers, onions roasted with olive oil, balsamic vinegar, basil, thyme, salt and pepper	4.32 (1.83)
В	butternut squash roasted with olive oil, salt and pepper, finished with rosemary, parsley, olive oil, and balsamic vinegar	4.37 (1.97)
В	broccoli and cauliflower blanched and roasted with olive oil, garlic, and salt	4.50 (1.84)
В	broccoli and carrots sauteed with olive oil, garlic, salt, vinegar, and crushed red pepper	4.66 (1.77)
В	brussels sprouts sauteed with bacon, pepper, chicken stock, and red wine vinegar	4.66 (2.01)
В	zucchini steamed and mixed with tomatoes, tomato sauce, oregano and pepper, baked with breadcrumbs, butter, and parmesan cheese	4.81 (1.73)
В	broccoli steamed and tossed with sesame oil, soy sauce, sesame seeds, and pepper	4.91 (1.63)
В	corn on the cob grilled with olive oil, salt and pepper	5.77 (1.33)
С	beets roasted with olive oil and tossed with mandarin oranges	3.01 (1.78)
С	leeks braised with butter, vegetable stock, lemon zest, salt, and pepper	3.68 (1.89)
C	arugula sauteed with olive oil, salt and pepper	3.80 (1.83)
C	cabbage braised with butter, vegetable stock, lemon zest, salt and pepper	4.01 (1.95)
С	cauliflower blanched and mashed with olive oil, salt and pepper	4.08 (1.80)
C	peas sauteed with olive oil, salt and pepper	4.20 (1.70)
C	carrots roasted with olive oil	4.21 (1.64)
С	spinach in a cream sauce (heavy cream, whole milk, butter, flour) sauteed with onions, nutmeg, salt and pepper	4.27 (1.88)
С	butternut squash roasted with sage, butter, brown sugar, salt and pepper	4.46 (1.91)

С	mushrooms roasted with olive oil, salt and pepper	4.53 (1.99)
С	corn sauteed with cream sauce (heavy cream, sugar, whole milk, parmesan cheese, salt and pepper	4.83 (1.90)
С	green beans with bacon, onions, mushrooms, and garlic baked in a cream sauce (butter, flour, heavy cream, chicken stock), finished with white cheddar cheese, salt and pepper	4.96 (1.99)
D	cabbage sauteed with oil, cayenne pepper, and salt	3.71 (1.86)
D	collard greens sauteed with oil, salt and pepper	3.73 (1.90)
D	kale sauteed with garlic, onion, carrots, oil, salt and pepper	3.78 (1.81)
D	brussels sprouts roasted with oil, salt and pepper	4.12 (1.93)
D	spinach sauteed with tomatoes, onion, chicken base, oil and pepper	4.25 (1.82)
D	green beans steamed and tossed in toasted almonds and margarine	4.26 (1.75)
D	roasted acorn squash brushed with brown sugar and margarine	4.32 (1.78)
D	carrots steamed and tossed in citrus glaze (orange juice, butter, brown sugar, salt)	4.87 (1.71)
D	green beans boiled and sauteed with bacon, onion, garlic, butter, lemon, salt and pepper	4.96 (1.82)
D	corn on the cob steamed and lightly seasoned	5.26 (1.41)
E	boiled brussels sprouts	2.27 (1.47)
Е	boiled green beans	3.14 (1.63)
Е	farro, onions, carrots, garlic, peppers, celery, tomatoes, and okra sauteed with vegetable stock, olive oil, thyme, cayenne pepper, and pepper	3.67 (1.77)
Е	edamame boiled and tossed with soy sauce and sesame oil	3.95 (1.86)
Е	cauliflower steamed and pureed with leeks, garlic, margarine, salt and pepper	3.98 (1.83)
Е	boiled corn	4.06 (1.70)
Е	steamed broccoli with salt	4.17 (1.92)
Е	zucchini, yellow squash, and mushroom rotisserie cooked with olive oil, salt and pepper	4.18 (1.81)
Е	butternut, acorn, and pumpkin squash roasted with olive oil	4.26 (1.87)
Е	lightly grilled asparagus	4.42 (1.92)
Е	carrots rotisserie cooked with olive oil and salt	4.58 (1.70)
Е	green beans blanched and sauteed with green peppers, red peppers, and onion in canola oil, finished with garlic, basil, salt, and parmesan cheese	5.14 (1.75)

Note: Taste ratings represent the mean tastiness rating of each recipe from a sample of N = 301 online survey participants on a scale of 1 = not at all delicious, to 7 = very delicious. Recipes were presented to survey participants as they appear in this table. Recipes are arranged in the table from lowest rated tastiness to highest rated tastiness within each school. Numbers in parentheses represent the standard deviation. Several recipes were not provided by schools and were thus not rated by participants. Participants rated several additional recipes that were served at school F but this site did not collect data.

Table S3. Vegetable selection data at each school participating in the DISH Study

Label Condition	School A	School B	School C	School D	School E
Health-focused (ref)	(ref)	(ref)	(ref)	(ref)	(ref)
Basic	-	0.16 (-0.16, 0.49)	-0.07 (-0.58, 0.41)	0.40 (-0.00, 0.81)	-0.00 (-0.49, 0.49)
Taste-focused	0.89 (0.45, 1.32)	0.55 (0.25, 0.85)	0.63 (0.11, 1.15)	0.19 (-0.21, 0.58)	-0.10 (-0.58, 0.38)

Note: Values represent standardized B coefficients with health-focused labeling coded as the reference group. Parentheses represent 95% confidence intervals of the difference between either basic or taste-focused labeling and health-focused labeling.

Table S4.

Descriptive statistics by label condition and outcome in Supplementary Study A

	Health-focused	Basic	Taste-focused
Expected Tastiness	2.88 (1.31)	3.06 (1.34)	3.52 (1.24)
Likelihood of Choosing	2.79 (1.43)	2.99 (1.44)	3.31 (1.41)
Reason for Choosing	2.28 (1.33)	2.55 (1.40)	3.36 (1.37)

Note: Values represent means and parentheses represent standard deviations.

Table S5. Vegetable dish labels in Supplementary Study B

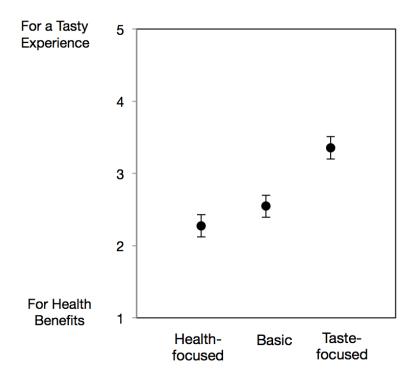
Basic	Taste-focused	Health-focused	Fancy	Vague Positive	Ingredients List
Zucchini	Panko Parmesan Crusted Zucchini	Healthy High Fiber Zucchini	Ambrosial Zucchini a l'Italienne	Absolutely Awesome Zucchini	Zucchini, Bread Crumbs, Parmesan
Carrots	Twisted Citrus Glazed Carrots	Healthy Vitamin Rich Carrots	Piquant Carrots au Citron	Incredible Carrots	Carrots, Orange Juice, Butter
Peas	Tavern Style Sizzlin' Sweet Peas	Light n' Low Carb Peas	Petite Mise en Place Peas	Wonderful Peas	Peas, Oil, Salt and Pepper
Green Beans	Sizzlin' Garlic Parmesan Skillet Green Beans	Smart Choice Heart Healthy Green Beans	Haricots Verts Green Beans a l'Italienne	Magnificent Green Beans	Green Beans, Onion, Garlic, Parmesan, Salt
Butternut Squash	Ultimate Glazed Butternut Squash Wedges	Nutritious Antioxidant Rich Butternut Squash	Venerable Full- bodied Butternut Squash	Extraordinary Butternut Squash	Butternut Squash, Oil, Salt, Pepper
Asparagus	Ultimate Chargrilled Asparagus	Nutritious Green Asparagus	Saporific Viridescent Asparagus	So Good Asparagus	Asparagus, Salt, Pepper
Broccoli	Asian Inspired Sesame Glazed Broccoli	Smart Choice Vitamin-packed Broccoli	Ebullient and Viridescent Broccoli Florettes	Marvelous Broccoli	Broccoli, Soy Sauce, Sesame Oil

Table S6.

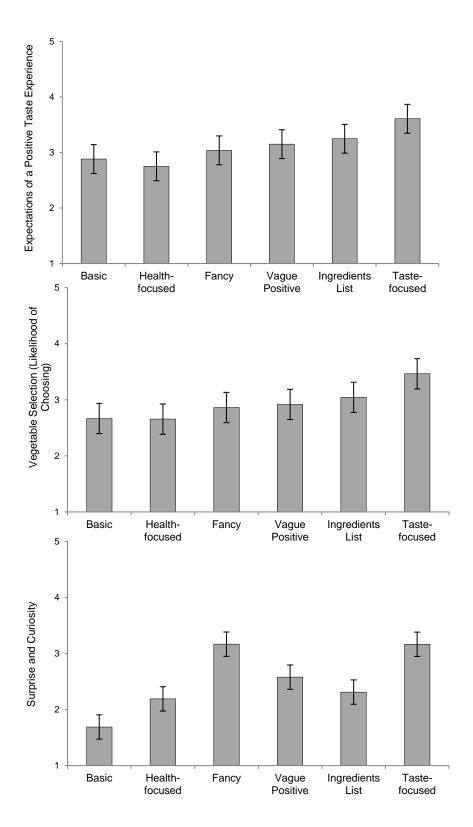
Descriptive statistics by label condition and outcome in Supplementary Study B

	Health-	Basic	Fancy	Vague	Ingredients	Taste-
	focused			Positive	List	focused
Expected Tastiness	2.75 (1.33)	2.88 (1.31)	3.04 (1.33)	3.15 (1.27)	3.25 (1.34)	3.61 (1.28)
Likelihood of Choosing	2.65 (1.37)	2.67 (1.41)	2.86 (1.37)	2.92 (1.39)	3.04 (1.40)	3.46 (1.34)
Surprise/Curiosity	2.19 (1.24)	1.69 (1.13)	3.17 (1.37)	2.58 (1.32)	2.31 (1.30)	3.16 (1.33)

Note: Values represent means and parentheses represent standard deviations.



**Fig. S1.** Participants' self-reported reason for choosing vegetables by label condition in Supplementary Study A. Points represent model estimates and error bars represent 95% confidence intervals. Participants indicated the extent to which they would choose a given vegetable label on a scale of 1 (*for health benefits*) to 5 (*for a tasty experience*).



**Fig. S2.** Ratings of perceived tastiness, vegetable selection, and surprise/curiosity by condition in Supplementary Study B. Participants rated expected tastiness ("how delicious would this taste?," 1 = not at all delicious, 5 = very delicious), surprise/curiosity ("To what extent are you surprised or curious about this dish?," 1 = not at all curious, 5 = very curious), and the likelihood that they would choose the vegetable dish ("how likely would you be to choose this?," 1 = not at all likely, 5 = very likely) for all 42 labels presented in Table S4. Bars represent model estimates and 95% confidence intervals.